

Appl. No. : 09-19,131
Filed : April 13, 2000

REMARKS

Applicants have amended the language of Claims 30, 32 and 47 to correct inadvertent typographical errors pointed out in paragraph 2 of the Office Action.

Claims 30 and 32 have been amended to insert "an inner wall" in line 4 of each of those claims and to remove the word "the" in line 5 of Claim 32 referring to inner and outer wall surfaces thereby obviating the rejections of Claims 30 and 32 under 35 U.S.C. § 112, ¶ 2, as pointed out in paragraph 4 of the Office Action. Claim 33 has been amended to correctly recite "said filter device." Claims 41, 44 and 47 have been amended to recite the scientific units for the numerals, again obviating the rejection under 35 U.S.C. § 112, ¶ 2.

Claims 30 and 32 have been further amended to recite that the fiber wall structure is a continuum of voids and solid frames from the outer wall to the inner wall and a continuum of voids bounded by solid frames as clearly shown in Figs. 2, 4 and 5 and described on page 3, lines 22-31.

In new Claims 52-56, dependent on Claim 30, the fiber wall is recited as a "plurality of concentric circumferential zones between inner and outer wall surfaces" as shown in Fig. 1, and wherein the zones comprise a continuous wall structure of pores and frames as disclosed on page 3, lines 22-31, and shown in Figs. 2-6. It is submitted that the amendments to the claims as well as the new claims herewith are fully supported by the original specification including the claims and drawings, and do not include new matter.

Claims 30-41, 44-47 and 50-51 are rejected under 35 U.S.C. § 103(a) as unpatentable over Gorsuch et al. '224 in view of Buck et al. and EP '494. The rejection, especially as it would be applied to the amended claims herewith, is respectfully traversed. Although Gorsuch et al. teaches *in-vivo* plasma separation by implanting a filter device comprising a plurality of hollow fibers which is connected to a catheter and wherein blood plasma passes through the wall of the hollow fibers into the lumen, there is no teaching of using a filter device having a fiber wall structure as recited in the present claims. The Examiner relies on Buck et al. to teach asymmetric membranes for medical treatments including plasmapheresis. However, there is no teaching or suggestion in Buck et al. of carrying out *in-vivo* plasmapheresis using elongated hollow fibers having wall structure characteristics as is recited in the claims herewith. There is no teaching of

a fiber wall structure having a continuum of voids and solid wall frames between the inner and outer wall of the fiber as is recited in Claims 30 and 32 and claims dependent thereon. Instead, the reference teaches a fiber structure comprising three layers, with the third layer having long macrovoids defined between the finger-like structure which extend over 50% and up to over 90% of the thickness of the fiber between the inner and outer fiber surfaces. Such a structure is disclosed, for example, at col. 2, lines 10-14, and col. 10, lines 53-60, and are shown in Fig. 1b. Buck et al. describe no filter device in which elongated hollow fibers are a continuum of voids bounded by solid frames between the inner and outer wall or a plurality of concentric circumferential zones having a continuous wall structure of pores and frames between the inner and outer wall surfaces as recited in claims 52-56.

The Examiner further relies on EP '494 as teaching an asymmetric hollow fiber having "a network structure which integrally continues from the inner surface to the outer surface." To the contrary, it is submitted that the reference does not teach any integral continuation of a network structure from the inner surface to the outer surface, but instead clearly discloses the critical requirement of the inner surface of the fiber having "a three-dimensional network structure having thick trunks of 10-30 microns;" see page 2, lines 18 and 19. The figures of the EP patent do not show a fiber having a continuum of voids and solid frames from the inner wall to the outer wall as is recited in Applicants' Claims 30 and 32 nor does it show or teach a fiber having a plurality of concentric circumferential zones between the inner and outer wall surfaces comprising a continuous wall structure of pores and frames. Accordingly, even if one skilled in the art were to combine the teachings of the references as proposed by the Examiner, there would be no method taught for using such fibers for *in-vivo* plasmapheresis as recited in Applicants' claims. Thus, it is submitted that the rejection based on the combinations of references is improper under 35 U.S.C. § 103(a).

The Examiner refers to Aptel et al. as pertinent to Applicants' disclosure. It is to be noted that the reference teaches a fiber having a wall structure made up of long macrovoids taking up more than 90% of the total wall thickness.

In view of the amendments submitted herewith as well as the distinction of the methods using the filter device as recited in Applicants' claims, which are not taught or suggested by the

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prior art, it is submitted that the claims are in condition for allowance and notification thereof is requested.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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